

OLYMPIC COAST NATIONAL MARINE SANCTUARY

A REPORT FOR SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: MARCH 20, 2015 – MAY 14, 2015

ABOUT THE SANCTUARY

Olympic Coast National Marine Sanctuary spans 3,189 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons.

The sanctuary protects a productive upwelling zone - home to rich marine mammal and seabird faunas, diverse populations of kelp and intertidal algae, and thriving invertebrate communities. The sanctuary is also rich in cultural resources, with over 150 documented historical shipwrecks and the vibrant contemporary cultures of Makah, Quileute, and Hoh Indian Tribes, and Quinault Nation.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

Organized based on Olympic Coast National Marine Sanctuary (OCNMS or sanctuary) management plan priority areas.

TREATY TRUST RESPONSIBILITY

Permit Consultation Protocol Established with Makah Tribe

Following a government-to-government meeting with the Makah Tribe in January 2015, Olympic Coast National Marine Sanctuary finalized a protocol that establishes a cooperative and timely process for consulting with the tribe on sanctuary permit requests and issuance. The sanctuary regularly issues permits for regulated activities that occur within the usual and accustomed fishing grounds of Native American treaty tribes. Most sanctuary permits support research and educational efforts. Whereas the sanctuary completes an assessment of impacts to natural and cultural resources associated with each permit request, the federal government's fiduciary responsibility for treaty tribes requires consideration of potential impacts of permitted activities to tribal interests. The Makah Tribe is recognized as the most appropriate entity to make this determination. This permit consultation protocol

established a standardized process that defines expectations for notification, document sharing, timeframes for response, and points of contact so that both parties have a common understanding, and effective consultation can proceed in an efficient manner.

Identifying and Protecting Critical Habitats

The Olympic Coast Intergovernmental Policy Council met by conference call to discuss ongoing efforts to develop a habitat classification scheme for Olympic Coast National Marine Sanctuary. Tribal and sanctuary staff have been identifying data and necessary expertise needed to further develop the habitat classification framework, including next steps.

NOAA National Marine Fisheries Service Holds Public Hearings on Makah Whaling

National Marine Fisheries Service, Office of Protected Resources (OPR), held two public hearings on the Makah Tribe's request for a waiver under the Marine Mammal Protection Act to conduct a hunt for gray whales. NMFS OPR developed a Draft Environmental Impact Statement (DEIS) that evaluated six alternatives, including a No Action Alternative, with the proposed hunt to take place within OCNMS. Makah Tribe has a treaty right to take marine mammals within their usual and accustomed area and may exercise treaty secured rights, subject to the requirements of applicable laws with the sanctuary. Sanctuary staff attended the Port Angeles hearing to listen to public comments. The public comment period will be open until June 11th. For more information on the DEIS, see:

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/cetaceans/whale_hunt.html

ACHIEVE EFFECTIVE AND COORDINATED MANAGEMENT

Olympic Coast Sanctuary Participates in Washington CoastSavers Strategic Planning

Olympic Coast National Marine Sanctuary staff joined an annual meeting of Washington CoastSavers to define strategic priorities for future program sustainability, growth, and impact. Washington CoastSavers coordinates two annual beach cleanup events that engage more than 1,000 volunteers in the marine stewardship work of removing debris from hundreds of miles of Washington's shoreline. Program growth in recent years includes significant expansion of geography covered and affiliations with a new Rivers & Oceans themed film festival and a Trashion fashion show with outfits made from marine debris.

Sanctuary Updated Incident Response Protocols

Olympic Coast National Marine Sanctuary (OCNMS) drafted an Incident Response Plan (plan) to update existing procedures. The plan is primarily a job aid for OCNMS staff during initial stages of an incident within the sanctuary and provides guidance on immediate actions that should be taken when notified of a vessel incident, spill or marine mammal stranding. The plan defines staff functions, provides online resources, and includes OCNMS 2015 training plan. Recommendations are provided on how OCNMS staff would support responses conducted under the Northwest Area Contingency Plan, the official oil spill response plan for Washington, Oregon and Idaho. OCNMS's plan is designed to be updated annually based on existing staff resources and training requirements.

Quileute Tribe and US Coast Guard Respond to Sunken Fishing Vessel

Olympic Coast National Marine Sanctuary (OCNMS) supported the efforts of the Quileute Tribe and area oil spill responders by facilitating communication amongst response agencies and area resource trustees. On March 26 the US Coast Guard (USCG) notified the sanctuary that the Commercial Fishing Vessel *Nellie M* had sunk at the pier in the La Push Marina, near OCNMS. La Push Harbor Master and USCG Station Quillayute River responded and deployed boom prepositioned in the harbor. USCG and Washington State Department of Ecology sent responders to the site and Global Marine Diving and Salvage was contracted to remove an estimated 500 gallons from diesel from the vessel and to improve booming.

Local Groups Promote Volunteer Recruitment Initiatives

Olympic Coast National Marine Sanctuary (OCNMS) Education and Stewardship Specialist attended a volunteer management training provided by Puget Sound Partnership for ECO-Net partners. OCNMS is represented in the Strait ECO-Net region through its partnership with non-profit organization, Feiro Marine Life Center. The volunteer management training, provided by Trachtman Consulting Services, focused on general and targeted recruitment, retention as an outcome, and performance management.

Promoting Improved Education and Regional Tourism for Olympic Peninsula

Carol Bernthal, Sanctuary Superintendent, and Melissa Williams, Executive Director, Feiro Marine Life Center addressed the Port of Port Angeles Commissioners, requesting their support for funding for feasibility studies for an enhanced marine education facility at City Pier in Port Angeles. The Commissioners voted unanimously to write a letter of support and expressed their interest in collaborating on educating the public on environmental stewardship for the Port of Port Angeles.

Sanctuary Advised on Enforcement Issues

The Technical Advisory Committee (TAC) for Olympic Coast National Marine Sanctuary conducted the first bi-annual meeting of 2015. The TAC is hosted by NOAA Office of Law Enforcement and includes Washington State Department of Wildlife and U. S. Coast Guard law enforcement professionals. The status of existing cases and operational planning for enforcement activities were discussed.

OCNMS Recognizes Volunteers of the Year 2014 Sally and Paul Parker



Sally and Paul Parker were nominated as the Volunteers of the Year in 2014 for their involvement together and separately in several activities supporting Olympic Coast National Marine Sanctuary (OCNMS). The Parkers are significant contributors to OCNMS citizen science teams collecting data for the NOAA Marine Debris Monitoring Program and for Coastal Observation and Seabird Survey Team (COASST). Both programs are vital for gathering information to inform sanctuary management and engage private citizens to improve awareness of ocean health and inspire stewardship of marine resources. Sally and Paul Parker are also instrumental as local stewards in their community at Neah Bay, participating in the fall and spring Washington Coastal Cleanups sponsored by CoastSavers each year. They became steadfast volunteers since joining OCNMS in 2007, collectively contributing more than 725 hours towards monitoring coastal health. Sally and Paul go above and beyond data collection, collecting as much marine debris as they can haul off of their surveyed beaches each month and volunteering for the fall and spring

Washington Coastal Cleanups each year, demonstrating a strong commitment to ocean protection. Paul Parker has also been a COASST Advisory Board member for two years, helping to shape the future direction and purpose of citizen science in Washington State, and providing important input from a community members' perspective. The Parkers will be honored along with one volunteer nominee from each of the other 13 sanctuaries in June at the Ocean Awards Gala during Capitol Hill Ocean Week in Washington, D.C, organized by the National Marine Sanctuary Foundation. Volunteers are the lifeblood of the Nation Marine Sanctuary program and are truly our ambassadors to our national marine treasures. Thank you for all your hard work Sally and Paul!

IMPROVE OCEAN LITERACY

Olympic Coast Sanctuary Presented at Local Elementary School Science Night

Education staff represented Olympic Coast National Marine Sanctuary (OCNMS) at Franklin Elementary School's annual Science Night for students and their families. Over three hundred students and family members participated in activities on marine debris buoyancy and entanglement. Families were encouraged to sign up for the upcoming Washington Coast Cleanup to help remove marine debris from sanctuary and Strait of Juan de Fuca beaches.

Olympic Coast National Marine Sanctuary Speaks to Area Lions Clubs and Rotary Club

Olympic Coast National Marine Sanctuary (OCNMS) represented sanctuary partner Washington CoastSavers program at Clallam Bay and Sequim Lions Club meetings. Danny Palmer, Education and Stewardship Specialist, presented on marine debris using albatross boluses, volunteer options and the WA CoastSavers program along with the upcoming WA Coast Cleanup. The presentation was also given to the Port Angeles Lions Club and Rotary Club. Many Lions Club and Rotary members have been active in past beach cleanup efforts and now have broader background information to share with other volunteers, as well as a deeper connection to marine animals and habitats negatively impacted by marine debris.

Olympic Coast National Marine Sanctuary Participates in Student Career Fair

Olympic Coast National Marine Sanctuary (OCNMS) staff participated in a career fair held in Forks on March 24, hosted by Peninsula College and the University of Washington's Olympic Natural Resource Center. Approximately 300 eighth to twelfth grade students from Forks and La Push schools attended the fair to learn about college opportunities, requirements and career paths. Sanctuary staff engaged with students interested in ocean conservation through stewardship, education, science and management. Twenty vendors were available for student questions, as well as speaker sessions for more in-depth information from local professionals.



Students Learn About Orcas and Management Issues Through GIS workshop

Olympic Coast National Marine Sanctuary Geographer (OCNMS) Nancy Wright and Tim Reed of Gulf of the Farallones National Marine Sanctuary taught a graduate level course at Friday Harbor Lab in Geographic Information Systems (GIS) for students from the Three Seas program of Northeastern University in Boston. Students study marine and environmental sciences in the Atlantic, the Pacific, and the Caribbean. This year Reed and Wright developed a curriculum based on the designation of critical habitat for the endangered Southern Resident Killer Whales (orcas) within OCNMS using National Marine Fisheries Service's data from satellite tags on orcas and the placement of passive acoustic moorings. The goal of the annual workshop is to introduce GIS using the sanctuaries' coastal and marine management concerns and to teach students to present spatial solutions that assist in policy development for marine spatial planning.

Addressing Ocean Acidification in the Pacific Northwest

As part of the "Sound Conversations" series hosted by the Seattle Aquarium, a panel of experts discussed innovation, cooperation, and leadership regarding ocean acidification in Washington State. Washington is recognized as a national leader on this topic, with conduction of cutting-edge research by NOAA and through the University of Washington's Center for Ocean Acidification to better understand the nature of this phenomenon as well as its ecological impacts on marine ecosystems critical to the state's economic well-being. Senator Maria Cantwell has championed ocean acidification and Governor Inslee committed to taking active steps to mitigate and respond to this challenge. Wendy Schmidt, title donor and philanthropist, discussed the Ocean Health XPrize, a \$2 million global competition that challenges teams of engineers, scientists and innovators from all over the world to create pH sensor technology that will affordably, accurately and efficiently measure ocean chemistry from shallow waters to great depths. Fourteen teams have submitted their sensors for a month-long performance test in a coastal environment at the Seattle Aquarium and then will be deploying them off Hawaii.

Ocean Acidification Education for Middle School Students

An evening presentation on ocean acidification was given to 21 seventh grade students and three teachers visiting Olympic Peninsula from Seattle. Olympic Coast National Marine Sanctuary (OCNMS) education staff provided an overview of the sanctuary and marine protected areas with an accompanying hands-on activity on ocean acidification. Students then discussed actions we can all take as individuals to help mitigate the impacts of a more acidic ocean environment in preparation of their field trip to Second Beach the following day. The topic was also shared with 21 high school biology students and 4 teachers from Skagit Adventist Academy in Burlington. After an overview of the sanctuary and a presentation on Oceans Recipe for Success which emphasizes ocean acidification, students learned about the challenges ocean acidification presents to the marine food web and human communities. The students then conducted a plankton tow with OCNMS partners at Feiro Marine Life Center, viewing the sample under the microscope and to better understand what organisms form the base of our marine food web.

Sanctuary Staff, Volunteers and Community Prepare for Earthquake and Tsunami Survival

Olympic Coast National Marine Sanctuary (OCNMS) Education Specialist presented to colleagues and sanctuary volunteers on earthquake and tsunami preparedness after attending a 4 day workshop provided by Cascadia Earthscope Earthquake and Tsunami Training and Preparedness (CEETEP). This training was the first step in educating our local communities about the science of plate tectonics and tsunamis and how to prepare ourselves and communities in the event of a large magnitude earthquake and subsequent tsunami. The presentation included a basic overview of plate tectonics and tsunamis, a briefing on Cascadia, and key steps toward becoming a resilient community in the face of a natural disaster. The Olympic Peninsula is part of Cascadia, a highly geologically active zone in the Pacific Northwest that includes northern California, Oregon, Washington, and parts of British Columbia. The last Cascadia mega-thrust earthquake occurred in January 1700, which historically occur every 200-1000 years. Participants then made a “go bag” containing 24 hours of survival tools enabling them to be ready at any time.

On May 8 a free community event on Earthquake and Tsunami science and preparedness was offered at the Port Angeles Library by OCNMS in partnership with Clallam County Emergency Management, Port Angeles High School, Stevens Middle School, and the North Olympic Library System. The event kicked off with an earth-moving performance by the Port Angeles High school choir Bella Vocce, followed by Jamie Valadez of Lower Elwha Klallam Tribe recounting traditional stories of the great tsunami “flood” through generations of tribal members. Dr. Brian Atwater presented the science and discovery involved in documenting the last Cascadia quake of 1700 and Brynne Walker from Washington State Emergency Management shared information for community and personal preparedness in the case of a major natural disaster such as a Cascadia mega-thrust earthquake. Local emergency management personnel were available with brochures and information on Clallam County emergency services, and Stevens Middle School 8th graders were on site with demonstrations of hands-on earthquake and tsunami science activities. The event was part of a Cascadia Earthscope Earthquake and Tsunami Education and Preparedness (CEETEP) workshop working group.

Olympic Coast Sanctuary Co-Hosts River and Ocean Film Festival

Following the Washington Coast Cleanup, many volunteers and community members finished their Earth Week celebrations at the Second Annual River and Ocean Film Festival. Approximately 115 audience members enjoyed an entertaining and educational night of film explorations of our rivers and oceans highlighting the beauty and opportunities of Olympic Peninsula region, as well as some of the issues faced by its marine and freshwater habitats and the human community. The audience favorite was Florian Graner’s *Discover the Olympic Coast- A Seal’s Tour*, filmed almost entirely within Olympic Coast National Marine Sanctuary. Sanctuary education staff hosted an informational booth on marine debris.

Welcoming Migrating Birds at Shorebird and Nature Festival in Hoquiam



Grays Harbor Audubon Society, Grays Harbor National Wildlife Refuge, and the City of Hoquiam worked with a host of other local sponsors to bring together the annual Grays Harbor Shorebird and Nature Festival May 1-3 in Hoquiam, WA. This event is timed to match the annual migration of hundreds of thousands of shorebirds as they stop at to feed and rest at the Grays Harbor estuary before departing for their nesting grounds in the Arctic. This concentration of birds offers people a great chance to view a number of shorebird species. Olympic Coast National Marine Sanctuary (OCNMS) hosted an informational booth in the exhibitor’s hall, with OCNMS staff leading adults and children through a dissection of albatross boluses as they discussed the problem of marine debris in our ocean and on our shorelines. Kids were able to draw a picture of Wisdom the Laysan Albatross as they brainstormed personal actions we can

all take to help albatross and other animals live long and healthy lives like Wisdom. The festival offered a series of speakers, guided tours through national wildlife refuges and local viewing areas, and an exhibitors’ hall. The festival was attended by over 1,000 visitors.

CONDUCT COLLABORATIVE RESEARCH, ASSESSMENTS AND MONITORING TO INFORM ECOSYSTEM-BASED MANAGEMENT

Micro Marine Debris Monitoring at Norwegian Memorial

Olympic Coast National Marine Sanctuary and Feiro Marine Life Center Citizen Science program staff visited Norwegian Memorial beach site to collect marine debris data micro debris. Ideas on data collection and protocols were discussed in preparation for a meeting with NOAA Marine Debris and Coastal Observation and Seabird Survey Team on May 27 and 28.



Olympic Region Harmful Algal Blooms Steering Committee Meets to Set Future Priorities

The ORHAB Partnership, founded in 1998, is a federal, state, tribal and private partnership dedicated to monitoring, studying, and mitigating the impacts of harmful algal blooms (HABs) along Washington's outer coast. Olympic Coast National Marine Sanctuary's Research Coordinator has served on the Steering Committee since its inception. The state Legislature recently approved a small increase to a surcharge on recreational shellfish licenses that will provide the Department of Health and the Department of Fish and Wildlife with additional funding to support expanded monitoring of blooms throughout the state.

From 1999 to 2004, NOAA's MERHAB office provided the ORHAB partnership with an initial 5 years of funding, in exchange for a promise to make a good faith effort to seek local or non-federal funding for a permanent HAB monitoring program. Other regions of the country were also provided similar deal to catalyze the creation of long-term monitoring programs. The ORHAB partnership stands as the only program to deliver on its commitment to secure local (non-federal) funding. In 2003, The Legislature enacted a small surcharge on certain recreational fishing licenses to support biotoxin monitoring. A portion of those funds are dedicated specifically to the UW Olympic Natural Resources Center for the ORHAB program. With those funds, ONRC has supported two technician positions: one employed by ONRC stationed in Grays Harbor and one employed by Washington Department of Fish and Wildlife stationed in Pacific County. The Quinault Indian Nation, the Quileute Tribe, and the Makah Tribe also employ technicians who sample and analyze plankton blooms and biotoxins in their areas of the coast. The additional funding provided during the current legislative session will expand the capacity of the state agencies to respond to Washington's increasing frequent HAB events. The additional funding will allow the UW ONRC to expand its services to the ORHAB partnership and its Steering Committee.

The Steering Committee is currently updating the ORHAB Strategic Plan. The focus on ORHAB is to maintain local capacity to monitor harmful algal blooms, improve understanding of HAB-related coastal processes, and utilize that knowledge to safeguard public health. Analysis of water samples collected in April indicated elevated concentrations of harmful algae species, which triggered an alert to ORHAB partners and increased monitoring of clam tissues. This monitoring revealed a rapid increase in the toxin domoic acid in razor clams on southern Washington beaches to levels that exceeded action levels for protection of human health. Domoic acid is produced by the diatom *Pseudo-nitzschia* and causes amnesic shellfish poisoning. As a result WDFW cancelled razor clam digs in early May and planned razor clam digs later in May will depend on shellfish toxin levels.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

Maritime Industry and US Coast Guard Support Sanctuary Protective Measure

Olympic Coast National Marine Sanctuary (OCNMS) released its annual report on estimated compliance in its Area to be Avoided (ATBA), which was established to protect sanctuary resources. Designated in 1994 by the International Maritime Organization, the ATBA is a voluntary vessel-routing measure that requests all vessels 400 gross tons (GT) and above transiting the area to stay a safe distance offshore, thereby mitigating the potential impact from spills and allowing more time for assistance to disabled vessels. OCNMS monitoring estimates 2014 compliance at 98 percent. Monitoring data show 4,676 transits of vessels over 400 GT through the sanctuary, with 104 vessels passing through the ATBA. The sanctuary works with the Canadian and U.S. Coast Guards to conduct outreach to vessels that do not comply to seek future compliance. OCNMS staff also met with the US Coast Guard (USCG) Sector Puget Sound Commander and the Chief of the Prevention Department to discuss joint ATBA monitoring and outreach efforts. OCNMS briefed USCG on the above results of 2014 monitoring and the Coast Guard shared ideas on further improving sanctuary's excellent compliance record. The annual report can be found online at: http://olympiccoast.noaa.gov/protect/incidentresponse/2014_ais.pdf.

Washington Coast Cleanup 2015 A Huge Success!



On Saturday April 25 over 1,500 volunteers gathered to collect marine debris from Washington shores from the Columbia River to Cape Flattery into the Strait of Juan de Fuca. All participants returned safely, hauling hundreds of bags of garbage, boat parts, floats, nets, rope and plastic bottles. An estimated 17 tons (34,000 pounds) of marine debris was collectively removed from over 60 beaches, with volunteers sorting through some marine debris at select sites to support recycling efforts. At the end of the day volunteers gathered at various barbecues, hosted by Surfrider Foundation, Grass Roots Garbage Gang, DNC Parks & Resorts and The Lost Resort to share stories, socialize and refuel. Olympic Coast National Marine Sanctuary staff organized volunteers at Neah Bay registration station and coordinated a remote beach cleanup at Cape B on Makah Reservation, along with

staff from Makah Tribe and Surfrider Foundation. Washington CoastSavers shoreline cleanup is the largest public event on the outer coast of Washington and serves to engage local and regional community members in marine conservation efforts.

Trained Beach Captains Provide Leadership at Washington Coast Cleanup

Olympic Coast National Marine Sanctuary (OCNMS), in coordination with Olympic National Park, conducted Washington Coast Cleanup Beach Captain Training for six volunteers including AmeriCorps and Student Conservation Association members, and Coastal Watershed Institute staff. Beach Captains assisted with the April 25 cleanup by providing direction, general information, encouraging trash removal and recycling, and serving as point of contact at beach locations.

Japanese Dock Grounding Site Surveyed for Invasive Species

In June 2012 a large floating dock, one of the four washed out from Misawa harbor by the devastating tsunami that hit Japan in March 2011, landed in Oregon, covered with living organisms (algae, barnacles, mussels, starfish, snails and more) many of which are not native to the eastern Pacific Coast, of which some are known invasive species. In late December 2012 another of these Misawa docks grounded in a remote location on the shores of Olympic Coast National Marine Sanctuary and Olympic National Park. Although early visits by federal and state personnel focused on removal of biofouling to mitigate species introduction and identification of organisms present, much of the biofouling was scoured from the dock surfaces as it moved toward shore in stormy seas. By March 2013 this dock had been dismantled and removed from the shoreline. In April 2015 Olympic Coast National Marine Sanctuary staff joined Washington Department of Fish and Wildlife's Aquatic Invasive Species crew to survey the dock grounding site for non-native species. The field team conducted an intensive search of the intertidal area and, although no obvious non-native organisms were found, they collected specimens and clumps of patch-forming biota for taxonomic analysis. To support an assessment of Japan tsunami marine debris as a vector for species introduction, the team also surveyed marine debris along the adjacent two miles of shoreline and collected biofouling organisms for taxonomists.

Tragedy Off the Olympic Coast

In the early morning hours of Sunday, May 3, the U.S. Coast Guard (USCG) received a mayday call from the *FV Sea Beast* that was taking on water and sinking 20 nautical miles off the coast in Olympic Coast National Marine Sanctuary. Three of the crew members were able to abandon ship and were promptly rescued by USCG Station Quillayute River. The subsequent search for the fourth crew member was extensive, lasting 18 hours, covering 136 square nautical miles and involving USCG crews from Sector Puget Sound, Station Quillayute River, Air Station Astoria and Air Station Port Angeles. The vessel sank in 400 feet of water, with approximately 500 gallons of fuel on-board. The cause of the accident is under investigation.

Oil Rig Transits Olympic Coast National Marine Sanctuary

The 400 foot tall semi-submersible offshore drilling rig, *Polar Pioneer*, loaded on the Heavy Lift Ship Blue Marlin, transited through Olympic Coast National Marine Sanctuary. The oil rig was transported from Asia and is anchoring in the Port Angeles Harbor temporarily with plans to move on to Seattle. The rig is part of Shell Oil's infrastructure for planned oil exploration in the Chukchi Sea.



SANCTUARY PERMITTING

No permit applications were received or permits issued in April-May 2015.

OCNMS-2015-001 – Mike Kelly, Consortium for Ocean Leadership – OOI

Project Title: Ocean Observatories Initiative - Endurance Array 25m Inshore Mooring and Glider Operations

Activity: During mooring servicing in April 2015, the line to the surface broke, and the mooring's bottom frame with instrumentation and anchor could not be retrieved. The permittee plans an initial ROV assessment of the anchor in early May. Imagery from this survey will help determine recovery options, which will occur as soon as required resources can be mobilized.

OCNMS-2011-003 – Heather Reed, Washington Department of Fish and Wildlife

Project Title: Coastal razor clam population assessment, Dungeness crab management, enforcement and derelict gear recovery surveys in the Olympic Coast National Marine Sanctuary.

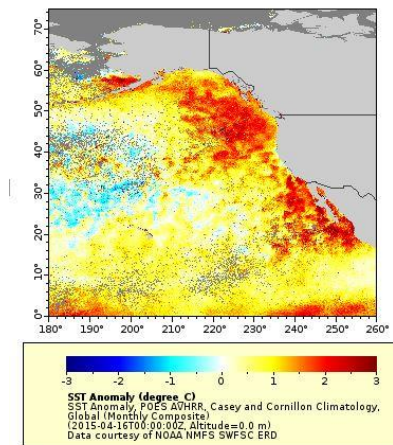
Activity: Assisted NOAA Marine Debris Program with evaluation of permitting, NEPA, MMPA, and ESA consultation requirements for derelict crab gear removal operations to be conducted in fall 2015 through a grant awarded to The Nature Conservancy and Quileute Tribe. WDFW's existing permit may be amended to include the overflights to support the TNC/Quileute efforts.

LEARN ABOUT YOUR SANCTUARY / NATURAL HISTORY

Warmer Pacific Northwest Waters Referred to as The Blob

Not since record-keeping began has the North Pacific Ocean been so warm for so long. From Alaska and the west coast of the United States all the way to Japan, the Pacific Ocean has maintained sea surface temperatures as high as 3 degrees C (about 5.4 degrees F) higher than average since 2013. This mass of warm water – nicknamed “The Blob” by UW’s Nick Bond – has the potential to disrupt the entire marine food web.

The Blob has brought interesting, and somewhat alarming, new phenomenon to the Pacific. Researchers have seen pygmy killer whales in California – 2,500 km north of their normal range. Weakened currents from the subarctic to the mid-Pacific have limited the nutrients fueling phytoplankton blooms at typical chlorophyll fronts. Closer to shore, the Blob’s warmer and therefore less dense surface water has formed a cap that keeps cooler, more nutrient-rich waters from reaching the surface. That means phytoplankton, a key food for marine animals, may not thrive. Scientists have already documented a drop in populations of copepods off the Oregon coast and an unprecedented jump in tiny sea creatures that normally live in the tropics.



Some species such as sardines and albacore tuna often thrive in warmer conditions. These populations may experience significant growth, survival, and abundance. However, Pacific Coast salmon and steelhead rely on cold-water nutrients. They may have to seek out the very narrow margin of cold water that still persists along the Northwest coast.

The Pacific Anomalies Science and Technology Workshop was held at Scripps Institution of Oceanography May 5-6, 2015 to discuss the impacts of The Blob on large-scale ocean and atmospheric processes, fisheries, ecosystems, and climate warming processes. Ref: *Northwest Fisheries Science Center (Michael Milstein); Scripps (Robert Monroe); Images ScienceMag.org (Marine Science, Eli Kintish.)*

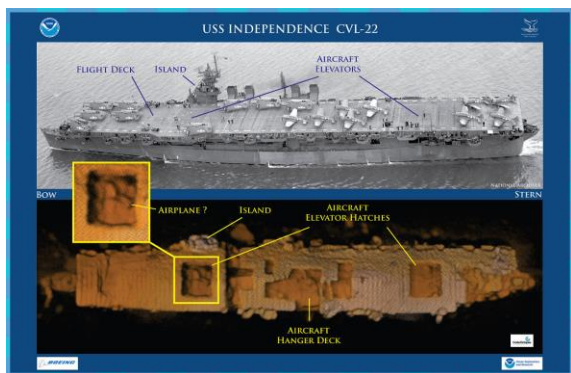
By-The-Wind Sailors Landing Ashore By the Thousands

If you have visited outer coast shores in the past month, you probably have encountered beached rafts of *Velella velella*, also known as sea rafts, by-the-sea sailors, or purple sails. These colonial hydrozoans are a type of cnidarian, which is the phylum that includes jellyfish and corals. When alive, *Velella* have deep blue/purple coloration, a stiff upright “sail”, and tentacles hanging down in the water to capture prey. Their stinging cells, or nematocysts, generally are not potent enough to sting humans. They float across the ocean surface driven by the winds. At sea, dense rafts of *Velella* can cover the ocean surface, and onshore winds can push these animals onto the shore where they die and decay. In recent weeks, windrows of beached *Velella* have been common on outer coast beaches and in some places accumulations of many thousands have formed mats more than a foot deep. This is a natural phenomenon, which raises an interesting question perhaps answered by traditional ecological knowledge: Are the numbers of *Velella* seen recently and the timing of this mass stranding normal for our area?



REGIONAL / NATIONAL MARINE SANCTUARY SYSTEM ONMS NEWS

Location of WWII-Era Aircraft Carrier USS Independence Confirmed



Office of National Marine Sanctuary (ONMS) and NOAA’s Office of Exploration and Research, together with private industry partners, confirmed the location and condition of the WWII-era aircraft carrier *USS Independence* in a portion of Monterey Bay National Marine Sanctuary managed by Gulf of the Farallones National Marine Sanctuary (GFNMS). Resting upright at 2,600 feet depth off California’s Farallon Islands, the vessel’s hull and flight deck are clearly visible in 3-D sonar images, with what appears to be a plane in the hangar bay. *Independence* was the lead ship of its class of light aircraft carriers, which were critical during the U.S. naval offensive in the Pacific, and later one of the more than 90 vessels assembled as a

target fleet for Bikini Atoll atomic bomb test in 1946. The ship was scuttled off the San Francisco coast in 1951. The work is part of a two-year mission to locate, map, and study the area's historic shipwrecks, of which *Independence* is one of an estimated 300. It is the deepest known shipwreck in the sanctuary. ONMS interest in *USS Independence* is part of a mandated and ongoing two-year mission to locate, map and study historic shipwrecks in GFNMS and nearby waters. For more information visit: <http://sanctuaries.noaa.gov/shipwrecks/independence> or <http://sanctuaries.noaa.gov/news/press/2015/independence-survey.html>

NOAA Fisheries Reconsiders Endangered Listing for Humpback Whales

The humpback whale, *Megaptera novaeangliae*, was listed in 1970 as “endangered” under the Endangered Species Preservation Act of 1966, the predecessor to the Endangered Species Act of 1973. In April 2015, National Marine Fisheries Service issued a Federal Register notice (<https://federalregister.gov/a/2015-09010>) that announced their intent to reclassify the humpback whale into 14 distinct population segments (DPSs), remove the current species-level listing, and list 2 DPSs as endangered (Cape Verde Islands/Northwest Africa and Arabian Sea) and 2 DPSs (Western North Pacific and Central America) as threatened. The remaining 10 DPSs are not proposed for listing based on their current statuses.

The summer/fall feeding ranges for the Mexico and Central America DPSs are along the coast of California, Oregon and Washington, and individuals from either DPS can occur in Olympic Coast National Marine Sanctuary. The Central America DPS has unique breeding habitat and unique DNA signature. Individual humpback whales in the Central America DPS migrate from breeding grounds off Costa Rica, Panama, Guatemala, El Salvador, Honduras, and Nicaragua to feeding grounds. The population estimate for the Central America DPS is <2,000 individuals, likely closer to 600 individuals, with an unknown population trend. No critical habitat is proposed for the Central America DPS because it is not currently determinable. Vessel collisions and fishing gear entanglements are considered likely threats to the Central America DPS. Especially high levels of large vessel traffic occur off Panama, southern California, and San Francisco. All other threats, such as coastal development, contaminants, noise, are considered likely to have no or minor impact on population size and/or growth rate, or are unknown for the Central America DPS. Additional information is available at <http://www.fisheries.noaa.gov/pr/species/mammals/whales/humpback-whale.html>

Washington Drought Declaration Adds 13 More River Basins

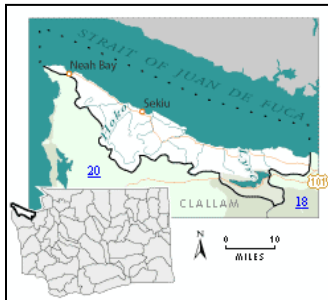


Figure 2: Water Resource Inventory Area (WRIA) 19 - Lyre Hoko

The inclusion of 13 more watersheds in designated drought condition means nearly 50% of Washington State is struggling to provide water supply for rivers and streams. People, farms, and fish are expected to experience hardship throughout the summer and fall as a result of minimal run-off from snowfall, the lowest snowfall on record in the past 64 years. Currently the east slopes of the Central Cascades, the Walla Walla River watershed, and the Olympic Peninsula have been declared regions of drought. Once an area has been declared in drought, it can qualify for drought relief funds that can be used for leasing water rights for irrigators, deepening or drilling wells, or initiating other emergency measures.

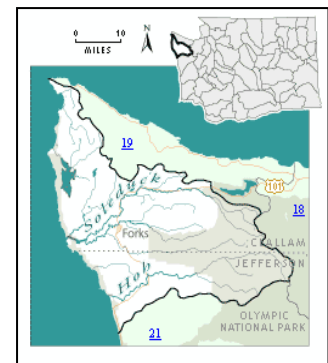


Figure 1: WRIA 20 - Sol Duc/Hoh Rivers

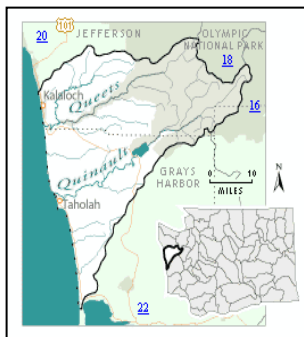


Figure 3: WRIA 21 - Queets/Quinault Basins

Three Olympic Peninsula WRIs are included in Governor Inslee’s drought declaration: Lyre/Hoko, Sol Duc/Hoh, and Queets/Quinault basins. At the time of the declaration, water supplies in these three basins were below 75% of normal water flow and unlikely to improve. The main drought-related problem is the river flow dropping so low that adult salmon cannot reach upstream spawning ground; low stream flows and high water temperatures becoming deadly to fish; and in some cases stream flows dropping after spawning, leaving salmon nests and eggs without sufficient water. As the season – and the drought – progress, WA Department of Ecology will work with federal, state, and local biologists to identify streams and reaches where both adult and juvenile fish will be affected. If possible, more efficient flow channels will be constructed and/or barriers to migration will be removed to help improve fish passage. These 3 basins do not have large population centers or extensive areas of agriculture. For the cities and towns that have public water supply systems, funding assistance for emergency water supplies will be available for drilling emergency wells. More information can be found at: <http://www.ecy.wa.gov/drought/olympicpeninsula.html>

Sanctuary Foundation 2014 Leadership and Lifetime Achievement Honorees Announced

National Marine Sanctuary Foundation (NMSF) Leadership Award recipients this year will be President and First Lady Bush. During his tenure, President Bush established four marine national monuments totaling more than 230,000 square miles of ocean protected by executive order, far eclipsing any other land or water designation by any previous President. President Bush also signed into law the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, the single most important step leading towards sustainable fisheries in the U.S., and further leading the way on fisheries reform in Europe and elsewhere. As First Lady and beyond, Mrs. Bush has been an avid public advocate for national marine sanctuaries, ocean literacy and America's role as a maritime nation. She actively supported the marine national monument designations process and served as honorary chair of the Preserve America program, which has helped support ocean heritage sites. She has continued her involvement in public discourse around ocean conservation, particularly on behalf of the Gulf of Mexico, in speeches, media and other public statements.

The recipient of the NMSF Lifetime Achievement Award is scientist, educator and author Jeremy Jackson, Ph.D. Dr. Jackson's five-decade career spans the disciplines of ecology, geology, marine biology, and paleontology. Among his many accomplishments, Dr. Jackson produced landmark research on the impacts of overfishing, marine pollution, and climate change on ocean ecology. As a science communicator, Dr. Jackson has been a powerful spokesperson on the imperative for reform in human actions and attitudes toward the ocean. Among his research, he has worked extensively on the ecology of coral reef communities and the tempo and mode of speciation in the sea. The author of more than 100 scientific journal articles and five books, Dr. Jackson is a Fellow of the American Academy of Arts and Sciences and the American Association for the Advancement of Science. President and Mrs. Bush and Dr. Jackson will be honored at the NMSF Ocean Awards Gala on June 9. More information is available at www.capitolhillcoastweek.org.

Richard Matzinger Announced ONMS 2014 Volunteer of the Year

Gulf of Farallones National Marine Sanctuary volunteer since 2012, Richard Matzinger was awarded Office of National Marine Sanctuary (ONMS) Volunteer of the Year for 2014. Richard contributed more than 200 hours for Beach Watch and Seabird Protection Network. In addition to his work in the field, on the beach, and in training new volunteers, Richard also used his technical skills at the computer, serving as web developer and computer programmer for the Beach Watch program. He has completely revamped the way Beach Watch manages its information, and how it presents that information to the public and is now doing similar work for the Seabird Protection Network. Given his background and training, Richard has brought a high degree of professionalism to the effort with invaluable benefits. With the newly announced expansion of the GFNMS, the import of Beach Watch and Seabird Protection Network will grow significantly, and the infrastructure Richard created will facilitate this growth. Overall his work contributes to the overall high quality of the citizen-science programs that we see throughout the National Marine Sanctuary System. Richard will be honored at the National Marine Sanctuary Foundation Ocean Awards Gala on June 9.



MARINE-RELATED NEWS COVERAGE

Orca Pod Struggles to Thrive: Whales Spend Part of the Year on Outer Coast

Satellite tracking now shows that endangered orcas make an extensive hunting trip along the outer coast every year.

www.dailystar.com/Local_News/20150323/orca-pod-struggles-to-thrive-whales-spend-part-of-the-year-on-outer-coast

CG Investigate Boat Sinking and Fuel Spill at LaPush

Personnel from the Coast Guard Sector Puget Sound Incident Management department responded to a report of a sunken vessel and diesel sheen near La Push. The local harbor master placed boom around the site to contain any further pollution and Coast Guard came to assist.

www.konp.com/local/10562

NOAA Proposes Expanding Focus of Hawaiian Islands Humpback Whale National Marine Sanctuary

After extensive collaboration with partners including non-governmental organizations, businesses, scientists, and other members of the community, a dramatic change is being proposed for the agency in charge of protecting Hawaii's humpback whales.

www.hawaiinewsnow.com/story/28618503/noaa-proposes-expanding-focus-of-hawaiian-islands-humpback-whale-national-marine-sanctuary

Orca Baby Boom Continues With Discovery of Fourth Calf

Whale-watching crews spotted a new baby orca in the Salish Sea on Monday, marking the fourth documented southern-resident killer-whale birth in three months.

www.seattletimes.com/seattle-news/orca-baby-boom-continues-with-discovery-of-fourth-calf/

Nature Conservancy Buys Timberland for \$7 Million Along Hoh River

The Nature Conservancy has bought 3,184 acres of Rayonier timberlands in the Hoh River drainage for \$7 million as part of a broad forest-restoration effort on the Olympic Peninsula. The land sale will help in the creation of a 32-mile conservation corridor extending along the Hoh River from Olympic National Park to the Olympic Coast National Marine Sanctuary.

www.peninsuladailynews.com/article/20150401/NEWS/150409999

Southern Residents Buoyed by Another Newborn, Fourth in Three Months

Whale-watch enthusiasts spotted another new addition to J-pod near Active Pass, British Columbia in March. When first sighted, the killer whale calf still showed tale-tell signs of fetal folds, indicating it was only a few days old.

www.islandsweekly.com/news/298350311.html

Press Release: Coast Guard Stops Two Commercial Fishing Boats for Safety Violations

Coast Guard crews operating in Rosario Strait and the Strait of Juan de Fuca terminated the voyages of two commercial fishing vessels for safety gear concerns.

www.peninsuladailynews.com/article/20150403/NEWS/150409997/coast-guard-stops-two-commercial-fishing-boats-for-safety-violations

Sparse Snowpack in Olympics Close to Worst in America's West

Despite a dusting of fresh snow on the peaks, the snowpack in the Olympic Mountains looks more like a record snow lack, fueling concerns about a thirsty summer.

www.peninsuladailynews.com/article/20150406/NEWS/304069976/sparse-snowpack-in-olympics-close-to-worst-in-americas-west

Warm 'Blob' Off Our Coast May Explain Weird Weather

A gargantuan blob of warm water that's been parked off the West Coast for 18 months is part of a larger pattern that helps explain California's drought, Washington's snow-starved ski resorts and record blizzards in New England, according to new analyses by Seattle scientists.

www.seattletimes.com/seattle-news/weather/warm-blob-in-nw-weird-us-weather-linked-to-ocean-temps/

Warming Pacific Makes for Increasingly Weird Ocean Life

A "blob" of warm water that's partly to blame for dead birds and stranded sea lions in the Pacific may share a cause with Boston's snows and California's drought.

news.nationalgeographic.com/2015/04/150411-Pacific-ocean-sea-lions-birds-climate-warming-drought

As Sea Stars Die, New Worries for Sea Urchins

Along California's central coast, an unusual underwater scene is unfolding. Where sea urchins previously hid in cracks and crevices, they now carpet the seafloor. Yet a couple hundred miles away, in southern California, urchins are losing their spines and dying.

news.nationalgeographic.com/2015/03/150401-urchins-sea-stars-monterey-bay-california-animals

Part Of Fishing Boat Destroyed In Japan Tsunami Appears Off Oregon

A piece of a commercial fishing boat that was ripped from Japan's coast by the March 11, 2011 tsunami has turned up on near Oregon four years later, carrying a small diaspora of live yellowtail jack fish, native to east Asian waters, according to state park officials.

kuow.org/post/part-fishing-boat-destroyed-japan-tsunami-appears-oregon

Feiro Marine Life Center Sees Surge in Visitor Count

The Feiro Marine Life Center is ramping up for a busy summer after a sharp increase in visitors over the past six months. For the past two quarters, the visitor count at the center has been up by double-digit percentage increases.

www.peninsuladailynews.com/article/20150408/news/304089989/feiro-marine-life-center-sees-surge-in-visitor-count

Orcas Are Shouting Over Boat Noise – And It Might Be Making Them Hungry

NOAA's Northwest Fisheries Science Center researchers found that loud boat noise forces endangered orcas to raise the volume of their calls.

kuow.org/post/orcas-are-shouting-over-boat-noise-and-it-might-be-making-them-hungry

Navy Still Examining Pursuit of Permit for Using Department of Natural Resources Lands in Electronic Warfare Training

The Navy still is studying whether to submit a permit request for the use of state Department of Natural Resources lands to conduct electronic warfare training.

www.peninsuladailynews.com/article/20150416/news/304169982/navy-still-examining-pursuit-of-permit-for-using-department-of

Frozen Giants Retreat: Glaciers Fading Away in Olympic Mountains, National Park Audience Shown

The pictures tell the story: Glaciers are receding in the Olympic Mountains and around the world, a team of University of Washington researchers told an overflow audience at the Olympic National Park Visitor Center.

www.peninsuladailynews.com/article/20150416/NEWS/304169984/frozen-giants-retreat-glaciers-fading-away-in-olympic-mountains

News Release: Coast Guard Orders Fishing Boat Into Port Angeles Because of Safety Violations

The crew of the Coast Guard cutter Sea Lion, while on patrol in the Strait of Juan De Fuca east of Port Angeles, terminated the voyage of a fishing vessel for safety gear concerns. The three member crew, harvesting geoducks, aboard the 28-foot vessel *Enforcer* was safely escorted to Port Angeles, where the vessel was ordered to remain until the crew fixed the especially hazardous safety condition of lacking any personal floatation devices.

www.peninsuladailynews.com/article/20150430/NEWS/304309975/coast-guard-orders-fishing-boat-into-port-angeles-because-of-safety

Did She Blow? NW Submarine Volcano Likely Just Erupted

More than 80 scientists from around the world gathered in Seattle last week to discuss a thrilling development. For the first time, seafloor instruments were providing a real-time look at the most active, submarine volcano off the Northwest coast — and all signs indicated it might erupt soon.

www.seattletimes.com/seattle-news/science/did-she-blow-nw-submarine-volcano-likely-just-erupted/

UW Tracks Volcano Erupting Offshore

www.komonews.com/news/local/UW-tracks-volcano-erupting-offshore-302378411.html

State, Growers Scrap Pesticide Permit For Oyster Beds After Outcry

Bowing to public pressure, the Department of Ecology and a growers association have agreed to cancel a recently issued permit for the use of a controversial pesticide to treat oyster beds. The permit to use a neurotoxic pesticide in Willapa Bay and Grays Harbor, two bays that account for a quarter of the commercial oysters produced in the U.S., prompted a deluge of grief from environmentalists, restaurateurs and the public.

www.seattletimes.com/seattle-news/environment/dept-of-ecology-growers-cancel-pesticide-permit-affecting-oysters-2/

Family Identifies Missing Captain of Neah Bay Fishing Vessel After Coast Guard Calls Off Search

The captain of a Neah Bay fishing vessel missing since his boat capsized was identified by his family. The Coast Guard search for skipper of *Sea Beast* was suspended after a 17-hour search. He was not seen after his crew got off the 52-foot commercial fishing vessel before it overturned in the Pacific Ocean 14 miles west of LaPush.

www.peninsuladailynews.com/article/20150504/NEWS/305049973/1-missing-3-rescued-as-fishing-boat-from-neah-bay-sinks-in-ocean-off

NOAA Study Could Set Stage for Makah Whaling to Resume

NOAA Fisheries released a draft environmental impact study that could set the stage for the resumption of whaling off the Washington coast by the Makah Indian tribe.

www.seattletimes.com/seattle-news/environment/noaa-study-could-set-stage-for-resumption-of-tribal-whaling/

Whale Magic in the 21st Century: Study Brings the Makah Closer to Whaling

Eight men in a canoe hardly seem a match for a large gray whale. So in ancient times when the Makah people hunted gray whales they called upon the spirits of their ancestors to help face a beast that could easily crush them with one flick of its tail. Their ancestors knew the secret. You don't just kill the whale; you become the whale.

indiancountrytodaymedianetwork.com/2015/03/31/whale-magic-21st-century-study-brings-makah-closer-whaling-159816

Whaling Opponent Changes Mind to Support Makah Tribe's Request; Turnaround Shocks Those at Port Angeles Meeting

At least one mind changed sides Wednesday at a public meeting on the Makah tribe's request to resume whaling, turning upon a flow of tears shed by a man who said he'd swum with whales.

www.peninsuladailynews.com/article/20150501/NEWS/305019969/whaling-opponent-changes-mind-to-support-makah-tribes-request

New Sea Star Babies Offer Hope Amid Mass Deaths in Pacific

In scattered sites along the Pacific Coast, researchers and others have reported seeing hundreds of juvenile sea stars, buoying hopes for a potential comeback from a disease causing millions of sea stars to disintegrate.

www.seattletimes.com/seattle-news/new-sea-star-babies-offer-hope-amid-mass-deaths-in-pacific/

Coast Guard Responds to 'Oil Spills,' Finds Jellyfish Instead

Billions of small jelly fish-like creatures known as "by-the-wind sailors" washing up on West Coast beaches look like pieces of plastic bleaching on the sand. Mariners have been mistaking them for oil spills.

www.chinookobserver.com/co/local-news/20150504/coast-guard-responds-to-oil-spills-finds-jellyfish-instead

West Coast Sardine Fishery Being Shut Down

Nearly 75 years after the historic collapse of the sardine fishery, the resource is again dwindling in West Coast waters. As of July 1st commercial fishing for sardines on the West coast will close once again.

www.kionrightnow.com/news/local-news/west-coast-sardine-fishery-being-shut-down/32990586

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OCNMS ONLINE

Visit our website at <http://olympiccoast.noaa.gov/>

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Please take a few moments to peruse the site. Your feedback is greatly appreciated.

*Comments and suggestions can be sent to
Jacqueline.Laverdure@noaa.gov.*

FUN, OCEAN-RELATED WEBSITES

National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

National Ocean Service

<http://www.nos.noaa.gov/>

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

NOAA Marine Debris Program

<http://marinedebris.noaa.gov/>

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

Encyclopedia of National Marine Sanctuaries

<http://www8.nos.noaa.gov/onms/park/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

Washington's Ocean Resources

<http://www.ecy.wa.gov/programs/sea/ocean/index.html>

CoastWatch – West Coast Regional Node

<http://coastwatch.pfel.noaa.gov/>

Northwest Association of Networked Ocean Observing Systems

<http://www.nanoos.org/>

NOAA's Pacific Marine Environmental Laboratory

<http://www.pmel.noaa.gov/>

OLYMPIC COAST NATIONAL MARINE SANCTUARY

Learn More about Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by Olympic Coast National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our website at <http://www.olympiccoast.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html

Office of National Marine Sanctuaries (ONMS)
Olympic Coast National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 176,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS website at:
<http://www.sanctuaries.nos.noaa.gov/>

Get Involved!

To learn how to get involved in the Sanctuary visit:
<http://olympiccoast.noaa.gov/involved/welcome.html>

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